

US 17 Business (North Church Street)
From South of the Perquimans River Bridge to NC 37
Including the Replacement of Bridge No. 8
Perquimans County
State Project 35748.1.1

TIP Project R-4467

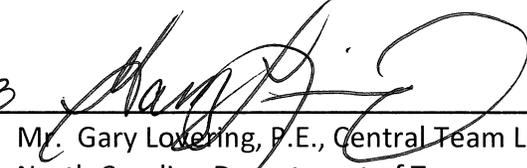
STATE FINDING OF NO SIGNIFICANT IMPACT

**North Carolina Department of Transportation
Division of Highways**

Submitted pursuant to:
The North Carolina Environmental Policy Act



APPROVED:

1/19/18 
Date Mr. Gary Lovering, P.E., Central Team Lead – Eastern Region
North Carolina Department of Transportation

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Document Prepared
For the Project Development and Environmental Analysis Unit
By Kimley-Horn and Associates, Inc.

January 2018

1/19/18

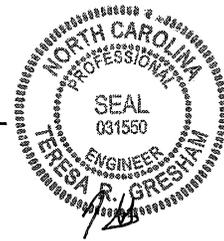
Date

Mr. John Conforti, REM, Project Manager
North Carolina Department of Transportation

1/24/18

Date

Ms. Teresa Gresham, P.E., Project Manager
Kimley-Horn and Associates, Inc.



PROJECT COMMITMENTS

US 17 Business/NC 37 (North Church Street)
From South of the Perquimans River Bridge to NC 37
Including the Replacement of Bridge No. 8
Perquimans County
State Project 35748.1.1

TIP Project R-4467

NCDOT Division One Construction/NCDOT Design-Build Unit

Unanticipated Discovery: In accordance with 36 CFR 800.11(a), if NCDOT identifies additional cultural resource(s) during construction and determines them to be eligible for the National Register of Historic Places (NRHP), all work will be halted within the limits of the NRHP-eligible resource(s) and the US Coast Guard (USCG) and North Carolina State Historic Preservation Office (SHPO) contacted within 48 hours. If after consultation with the Signatory Parties and additional mitigation is determined necessary, the NCDOT, in consultation with the Signatory Parties, will develop and implement appropriate protection/mitigation measures for the resource(s). NCDOT will notify the SHPO and USCG of any findings of additional cultural resources that are determined to not be eligible for NRHP listing. Inadvertent or accidental discovery of human remains will be handled in accordance with North Carolina General Statutes 65 and 70.

An in-stream work moratorium of February 15 to June 30 is required in the Perquimans River for anadromous fish species.

Construction activities will adhere to the procedures outlined in GUIDELINES FOR AVOIDING IMPACTS TO THE WEST INDIAN MANATEE Precautionary Measures for Construction Activities in North Carolina Waters (2003 USFWS).

Vibration Monitoring: To minimize vibration effects on the historic buildings in the vicinity of the bridge, a vibration monitoring and enforcement program shall be implemented by NCDOT as part of the construction contract. The Design-Build Team shall employ a vibration monitoring firm from NCDOT's list of approved firms to perform pre and post construction inventories and vibration monitoring of buildings located within 200 feet of the mainline project limits in the historic district. The inventories will require the appointed firm has access to the interior of buildings in the area being monitored.

If vibration levels rise above the prescribed thresholds that could cause structural damage to any building the contractor, or the property owners shall immediately contact the Resident Engineer. If structural damages are discovered during this period, work in that area of the project shall immediately cease and NCDOT shall contact SHPO and the property owners immediately to determine what steps should be taken to address the damage. After completion of all vibration inducing construction activities, vibration monitoring equipment may be discontinued. If vibration monitoring is to be discontinued prior to completion of the Undertaking, property owners will be notified by NCDOT.

NCDOT Historic Architecture Group

Photographic Recordation: Prior to the initiation of construction, NCDOT will record the existing conditions of the properties and landscapes in the Hertford Historic District, including Perquimans Bridge Number 8 that are located adjacent to or affected by the project area in accordance with the Historic Structures and Landscape Recordation Plan, which can be found in the Section 106 Memorandum of Agreement. The results of the photographic recordation will be submitted to the SHPO in advance of any work taking place. The SHPO shall have fifteen (15) days from receipt of the materials to review and comment. If no comments are received by NCDOT after the 15 days, work may commence. Copies of the documentation will be deposited in the files of the SHPO, NCDOT Historic Architecture Group, and the Town and be made available to other signatories to the MOA.

NCDOT Design-Build Unit/NCDOT Historic Architecture Group/NCDOT Project Development Section/State Historic Preservation Office

Design of Replacement Bridge: NCDOT has worked with the primary signatories and consulting parties to the memorandum of agreement on the plans for the replacement bridge and associated retaining walls to develop a unified design that incorporates context sensitive design principles and follows NCDOT's aesthetic guidelines. These design elements include: a truss swing span, Oregon rails, decorative pedestrian lights which match the streetlights throughout the town, safety standard vertical lift gates, two observational bump-outs on the bridge, sidewalks on the east side of the bridge, reuse of the current bridge plaque on the new bridge and an added second bridge plaque for the new bridge, retaining walls of stamped concrete within the historic district, signs on NCDOT property stating authorized vehicles and personnel only, flag pole with US and NC flags lit dusk to dawn, and fenders composed of artificial timber that include lights and signs.

Design of the Tender House: NCDOT, in consultation with the primary signatories and concurring parties, shall develop plans for the tender house and parking spaces designated for use by the bridge operator and bridge maintenance crew to develop a unified design that

incorporates context sensitive design principles and follows NCDOT's aesthetic guidelines. These design elements include: a two-story structure above the bridge deck with the generator housed inside the tender house; hipped roof structure with fiber cement siding; multi-light windows with pedimented arches; a three-foot wide walkway around the second story; and an escape ladder on the east side of the tender house.

NCDOT Roadside Environmental Unit/NCDOT Historic Architecture Group/State Historic Preservation Office

Landscape Plan: NCDOT, in consultation with the primary signatories and concurring parties, shall develop a landscape plan for the south side of the bridge within the Hertford Historic District contained within the NCDOT right of way.

NCDOT Natural Environment Section/NCDOT Design-Build Unit

The Design-Build Team will provide a description of proposed foundation designs and a map showing bent locations within the Perquimans River to the Natural Environment Section as soon as that information is available.

An in-stream work moratorium of February 15 to June 30 is required in the Perquimans River for anadromous fish species. If drilled shafts are used, drill casings will be installed prior to the in-water work moratorium, allowing work within the casings to occur during the moratorium.

The new bridge will occupy essentially the same footprint as the existing structure, causing no significant loss of foraging habitat.

Turbidity generated during in-water construction and adjacent work will be minimized by NCDOT's best management practices and possibly through the use of turbidity curtains.

Passage upriver/downriver will not be impaired to the point that alternative pathways are not available.

Pile driving will not be conducted between the hours of 9:00 p.m. and 8:00 a.m.

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I. Type of Action

This State Finding of No Significant Impact (FONSI) is a North Carolina Department of Transportation (NCDOT) administrative action.

The NCDOT has determined the proposed project will not have significant impacts on the human or natural environments. This FONSI is based on the February 25, 2013 Environmental Assessment (EA), which was independently evaluated by NCDOT and determined to adequately and accurately discuss the environmental issues and impacts of the proposed project. The EA provides sufficient evidence and analysis for determining that an Environmental Impact Statement is not required. NCDOT takes full responsibility for the accuracy, scope and content of the EA.

II. Description of Proposed Action

NCDOT proposes to replace Bridge No. 8 over the Perquimans River and the existing causeway between the bridge and NC 37. The bridge and causeway carry US 17 Business over the Perquimans River, connecting Hertford and Winfall in Perquimans County. The proposed project is included in the NCDOT *2018-2027 State Transportation Improvement Program (STIP)* as Project R-4467 and is programmed for right-of-way acquisition and construction beginning in State Fiscal Year 2018 in the STIP. **Figure 1** shows the project vicinity map.

The purpose of the proposed project is to provide a direct, reliable route between Hertford and Winfall. The current causeway and bridge both show significant deterioration and present ongoing maintenance problems, jeopardizing the ability to provide reliable direct connectivity from downtown Hertford to Winfall. Replacing the bridge with a new structure will provide more reliable connectivity. This link provides a vital tie between the two communities and is important for sustaining the economic vitality of both towns, maintaining community cohesion, providing a school bus route within Perquimans County, and providing direct access for residents without a vehicle to travel between Hertford and Winfall.

Bridge No. 8 is an S-shaped swing-span bridge built in 1929 that is deteriorating due to the age of the superstructure and substructure components. The existing bridge has a sufficiency rating of 3 out of a possible 100 as of December 2015. In addition, mechanical parts required to keep the swing-span operational are difficult and expensive to obtain. Repairs often require custom-made parts.

Table 1 shows the costs for Project R-4467 included in the 2018-2027 STIP and estimated for the preferred alternative.

Table 1. Project Costs

Item	Cost (in millions)	
	2018-2027 STIP	Preferred Alternative
Construction	\$38.6	\$48.3
Right of Way	\$0.9	\$0.9
Utilities	\$0.1	< \$0.1
Total Project Cost	\$39.6	\$49.2

III. Project History

After the EA was distributed in February 2013, NCDOT held a public hearing in September 2013. Citizen comments were recorded and considered (see **Section VII**). Based on comments heard at the hearing and a resolution received from the Town of Hertford following the hearing, NCDOT selected Alternative D-Mod as the Department’s preferred alternative.

When the project planning process began, both federal and state funds were anticipated. Since approval of the EA, funding for this project changed to state funds only.

This project began as part of the NCDOT NEPA/404 Merger Process. The Merger Team was involved until January 2015, when the Merger Team concurred the project should be removed from the Merger Process due to limited anticipated impacts to jurisdictional resources. The concurrence forms for Concurrence Points 1, 2, and 2A are in the appendix of the Environmental Assessment.

Following coordination with the public, the Town of Hertford and the State Historic Preservation Office, the preferred alternative was changed from Alternative D-Mod to Alternative B Swing-Span (see **Section V**).

IV. Alternatives Considered

An extensive range of alternatives was studied through the course of this project. Alternatives were compared based on qualitative and quantitative analysis, public input, and agency input. For this project, NCDOT initially screened a combination of five bridge types on six alignments. These were narrowed down to nine conceptual alternatives to present to the public in April 2010.

Following the April 2010 workshop and October 2010 Merger Team meeting, five alternatives were selected for more detailed study and were presented at the June 2011 public workshop. At the August 2012 workshop, detailed designs for these five alternatives and two additional alternatives were presented.

In October 2012, the Merger Team chose three alternatives to be analyzed in the Environmental Assessment (**Figure 2**). Impacts of the alternatives are summarized in Table 2.

- **Alternative B 15-Foot Swing Span** – Build a new swing-span bridge with 15 feet of clearance on new location, and build a new low structure on the causeway. Raising the bridge to 15 feet would allow approximately 75% of boats currently using the channel to pass without opening the bridge.
- **Alternative D-Mod 33-Foot Fixed** – Replace the bridge and causeway with a new fixed-span bridge with 33 feet of clearance. The new structure would be located east of the existing bridge and causeway.
- **Alternative E 33-Foot Fixed** – Replace the bridge and causeway with a new fixed span bridge with 33 feet of clearance. The new structure would be located west of the existing bridge and causeway.

Table 2. Impacts of 2012 Detailed Study Alternatives

Topic	Alternative		
	B	D-Mod	E ¹
Relocations Residential	1	1	0
Business	0	0	1
Total	1	1	1
Minority/Low-Income Populations – Disproportionate Impacts	None	None	None
Historic Properties (Adverse Effect)	1 (S-bridge)	1 (S-bridge)	1 (S-bridge)
Community Facilities Impacted	0	0	0
Traffic Noise (# of receptors impacted)	24	24	16
Prime Farmland (Acres) ²	N/A	N/A	N/A
Forested Acres	0.1	< 0.1	< 0.1
Wetlands (Acres)	0.19	0.19	0.19
Streams (Feet)	0	0	0
Floodplains (Acres)	0	0	0
Submerged Aquatic Veg. (SAV) habitat (Acres)	0	0	0
Federally-Protected Species ³	3	3	3
Length (Miles)	0.82 miles	0.62 miles	1.01 miles
Construction Cost ⁴	B - \$31,300,000 B 15' - \$31,000,000	\$18,000,000	E 15' - \$25,200,000 E 33' - \$26,100,000

¹ Impacts are the same for alternatives on the same alignment unless otherwise noted.

² Study area is in urbanized area, so NRCS CPA-106 form is not required.

³ Suitable habitat has been documented within the project area for two federally-listed species (Atlantic surgeon and West Indian manatee), which have a biological conclusion of May Affect, Not Likely to Adversely Affect.

⁴ As of the February 2013 Environmental Assessment

It has been determined that rehabilitating the existing swing-span bridge is neither practical nor safe. A bridge rail would have to be added to the bridge to meet current safety standards. The existing bridge is too narrow to add the rail and still maintain two lanes of traffic. Therefore, if rehabilitated, the bridge would have to be converted to one-way traffic. Opposing traffic would be routed along the US 17 Bypass.

The No-Build Alternative would not meet the project's purpose and need but serves as a basis for comparing impacts and benefits of the build alternatives.

V. Preferred Alternative

NCDOT has selected Alternative B Swing Span as the preferred alternative for TIP Project R-4467 (**Figures 3A-C and Figure 4**).

Alternative B was selected because the Town of Hertford, the Town of Winfall and Perquimans County all currently support it. Although both Alternative B and Alternative D-Mod were determined to have an adverse effect on the National Register-listed Hertford Historic District as well as the bridge, it is expected Alternative B would have less of an adverse effect on the Hertford Historic District than Alternative D-Mod.

Following the September 2013 public hearing, NCDOT had selected Alternative D-Mod as the preferred alternative. At the time the Department selected Alternative D-Mod, the alternative was expected to have "no adverse effect with commitments" on the Hertford Historic District. Following selection of Alternative D-Mod, NCDOT, the State Historic Preservation Office, the Town of Hertford, Perquimans County and the Coast Guard received phone calls, emails and letters from residents of the historic district expressing opposition to Alternative D-Mod.

Many of those opposed to Alternative D-Mod, including a number of residents of the Hertford Historic District, supported Alternative E. However, Alternative E would drastically change traffic patterns in Hertford by rerouting US 17 Business. A number of residents along Edenton Road Street, downtown business owners and the Town of Hertford opposed Alternative E. The residents and businesses would be affected by the change in traffic patterns. At a public hearing held by the Town in July 2014, the crowd of over 100 people seemed to be fairly evenly split between Alternative D-Mod and Alternative E.

Following the July 2014 public hearing held by the Town, there was renewed interest among some citizens in Alternative B, which would construct a new swing span. Earlier public input had indicated this alternative was not worth the additional cost. This alternative would have similar effects on the historic district as Alternative D-Mod, but would cost approximately 12 million dollars more in initial construction cost than Alternative D-Mod, would cost more to operate

and maintain, and would require closing the US 17 Business route longer during construction (approximately 45 months versus 10 months for Alternative D-Mod).

In January 2015, the State Historic Preservation Office, the Coast Guard and NCDOT signed a second concurrence form stating Alternative D-Mod and Alternative B would both have an adverse effect on the Hertford Historic District. (See **Section VIII.C**).

Section 106 of the National Historic Preservation Act requires a memorandum of agreement (MOA) be prepared regarding how NCDOT will mitigate for the adverse effect to the historic resources affected by the project. During the process to prepare the MOA, the State Historic Preservation Office (NC HPO) expressed serious concerns regarding Alternative D-Mod. Discussions were held between NCDOT and NC HPO regarding how to resolve the HPO's concerns.

HPO's preferred alternative was Alternative E, but they stated a willingness to consider Alternative B.

In September 2014, the Town of Hertford passed a resolution supporting Alternative B and rescinding its October 2013 resolution supporting Alternative D-Mod. Perquimans County passed a resolution supporting Alternative B in December 2014.

In August 2016, NCDOT changed the preferred alternative from Alternative D-Mod to Alternative B Swing-Span.

VI. Summary of Project Impacts

Impacts for the preferred alternative are summarized in **Table 3**.

Table 3. Summary of Impacts for Preferred Alternative

Topic	Anticipated Impact
Relocations	
Residential	1
Business	0
Total	1
Minority/Low-Income Populations – Disproportionate Impacts	None
Historic Properties (Adverse Effect)	2 (Bridge No. 8 and Hertford Historic District)
Community Facilities Impacted	0
Section 106 Resources ¹	2
Traffic Noise (# of receptors impacted)	24
Prime Farmland (Acres)	N/A
Forested (acres)	0.1
Wetlands (acres)	0.19
Streams (feet)	0
Floodplains (acres)	0
Submerged Aquatic Veg. (SAV) habitat (Acres)	0
SAV (presence)	None
Federally-Protected Species ²	3
Hazardous Material Sites ³	6
Length (miles)	0.82
Cost Estimate (in millions)	
Construction	\$48.3
Right of Way	\$0.9
Utility Relocation	< \$0.1
Total	\$49.2

¹ A Memorandum of Agreement was prepared as part of Section 106 consultation.

² Suitable habitat has been documented within the project area for two federally-listed species (Atlantic surgeon and West Indian manatee), which have a biological conclusion of May Affect, Not Likely to Adversely Affect.

³ Five sites potentially contain underground storage tanks and one former auto repair facility. Actual impacts will be determined during final design.

VII. Comments and Coordination

The following section provides a summary of the agency coordination and public involvement efforts that took place after approval of the EA in February 2013.

A. Circulation of the Environmental Assessment

The EA for this project was approved by NCDOT and FHWA in February 2013. Copies of the approved EA were circulated to the following federal, state, and local agencies for review and comments. Written comments were received from agencies noted with an asterisk (*). Comments are listed in **Section VII.B**, and copies of these letters are included in **Appendix A**.

Federal Agencies

- U.S. Army Corps of Engineers (USACE)
- * U.S. Environmental Protection Agency (USEPA)
- U.S. Department of Interior, Fish and Wildlife Service (USFWS)
- U.S. National Oceanic and Atmospheric Administration – National Marine Fisheries

State Agencies

- N.C. Department of Administration – State Clearinghouse
- N.C. Department of Cultural Resources – Division of Archives and History (NCDCCR – SHPO)
- N.C. Department of Environmental and Natural Resources
- Division of Coastal Management (NCDCM)
- Division of Marine Fisheries (NCDMF)
- Division of Water Resources (NCDWR)
- N.C. Wildlife Resources Commission (NCWRC)
- N.C. Department of Crime Control and Public Safety
- Division of Emergency Management, Floodplain Management Branch

Local Agencies

- Town of Hertford
- Town of Winfall
- Perquimans County

The EA, along with public hearing maps, was available for public review at the following locations prior to the September 2013 public hearing:

- Hertford Town Hall, 114 West Grubb Street, Hertford
- Winfall Town Hall, 100 Parkview Lane, Winfall
- Perquimans County Courthouse, 128 N. Church Street, Hertford

- NCDOT Division 1 Office, 113 Airport Drive, Suite 100, Edenton
- NCDOT District Office, 1929 North Road Street, Elizabeth City
- Public Meetings website: www.ncdot.gov/projects/publicmeetings
- Project website: www.ncdot.gov/projects/US17BusinessNC37Improve

B. Agency Comments Received on the Environmental Assessment

Project specific comments on the EA were provided by the US Environmental Protection Agency (included in Appendix A).

U.S. Environmental Protection Agency (April 26, 2013)

Comment: “According to Section 4, pages 26 & 27, none of the alternatives are expected to have a disproportionate effect on low-income and minority populations. In the EJ discussion, it further relates that the direct impact to EJ communities is expected to be minimal. However, in Table 7, Alternative E is described to have an adverse and disproportionate impact to low-income and minority populations because of increased traffic past schools, between churches and parking areas, and between school and future athletic field. The analysis provided in Section 4 and the table footnote needs to be further documented and explained prior to the selection of the LEDPA. Furthermore, the Traffic Noise section on pages 33-36 does not identify any specific noise impacted receptors that are low-income or minority populations.”

Response: Table 7 had an error. The adverse and disproportionate impact to low-income and minority populations for Alternative E 33-Foot Fixed Span should have been “none” and the footnote removed.

C. Combined Public Hearing

A public hearing was held for the project on September 17, 2013 in the Perquimans County Recreation Department Gymnasium. A pre-hearing open house was held on the same day prior to the hearing in the Recreation Department Meeting Room. Public hearing maps and three-dimensional renderings for the three detailed study alternatives were displayed.

A total of 110 people signed in during the open house and public hearing. Written comments were received from 43 citizens. A summary of verbal comments from the public hearing and written comments returned during the 30-day comment period are included in **Appendix B**.

D. Additional Public Outreach

- **July 2014 Town Council meeting:** The Town of Hertford invited NCDOT to attend the July Town Council meeting to answer citizen questions and address concerns about Alternative D-Mod, the alternative recommended by NCDOT at that time. Approximately 130 citizens signed in. Following the meeting, NCDOT prepared visualizations to better exhibit the design of Alternative B.
- **November 2014 Public Meeting:** A total of 104 people signed in during this project update meeting. NCDOT reviewed all three alternatives presented at the public hearing, and showed visualizations for Alternative B.
- **Petitions:** The following resolutions and petitions were received following approval of the EA.
 - The Town of Hertford submitted a resolution supporting Alternative D-Mod (October 2013)
 - A total of 318 citizens signed a petition opposing Alternative D-Mod (June 2014)
 - A total of 185 citizens signed a petition supporting Alternative D-Mod (July 2014)
 - A total of 952 citizens signed a petition requesting further consideration of and information about Alternative B (July 2014)
 - The Town of Hertford submitted a resolution rescinding its October 2013 resolution and supporting Alternative B (September 2014)
 - Perquimans County submitted a resolution supporting Alternative B (December 2014)

VIII. Revisions to the Environmental Assessment

A. Design Exceptions

The EA reported that no design exceptions were anticipated for the project. Since the EA was approved in February 2013, two design exceptions have been incorporated into the project design: (1) horizontal sight distance and (2) a 2% superelevation for the southernmost curve on the bridge.

B. Federally-Protected Species

Since approval of the EA, the list of federally-protected species for Perquimans County has changed. The following information is amended to Section V.A.3 of the EA.

As of March 9, 2015, the West Indian manatee (*Trichechus manatus*) and red knot (*Calidris canutus rufa*) have been added to the list of federally protected species for Perquimans County since completion of the EA.

Suitable habitat for West Indian manatee exists in the study area, the Perquimans River is of sufficient size to support West Indian manatee. A review of NC Natural Heritage Program (NCNHP) records, updated January 2017, indicates no known occurrences of this species within one mile of the study area. Construction activities will adhere to the procedures outlined in GUIDELINES FOR AVOIDING IMPACTS TO THE WEST INDIAN MANATEE Precautionary Measures for Construction Activities in North Carolina Waters (2003 USFWS). The biological conclusion is that the proposed project “May Affect, but is Not Likely to Adversely Affect” this species.

Suitable habitat for the red knot does not exist within the study area. A review of NCNHP database records, updated January 2017, indicates no known occurrences of this species within one mile of the study area. Due to the lack of known occurrences, it has been determined the proposed project will have “no effect” on this species.

As discussed in the environmental assessment, the project may affect, but is not likely to adversely affect the Atlantic sturgeon. The National Marine Fisheries Service concurred with this determination on May 17, 2017.

Suitable habitat for bald eagle exists in the study area along the shoreline of the Perquimans River. No nest trees were observed during field investigations in February and December 2009 and January 2015. Additional field investigations in March 2017, also found no occurrences of the species.

The following measures will be employed to minimize impacts on the Atlantic sturgeon:

- February 15 through June 30 in-water work moratorium.
- If drilled shafts are used, drill casings will be installed prior to the in-water work moratorium, allowing work within the casings to occur during the moratorium.
- The new bridge will occupy essentially the same footprint as the existing structure, causing no significant loss of foraging habitat.
- Turbidity generated during in-water construction and adjacent work will be minimized by NCDOT’s best management practices and possibly through the use of turbidity curtains.
- Passage upriver/downriver will not be impaired to the point that alternative pathways are not available.

- Pile driving will not be conducted between the hours of 9:00 p.m. and 8:00 a.m.

C. Historic Architectural Resources

The proposed project is subject to Section 106 of the National Historic Preservation Act. As discussed in Section V.B.1 of the EA, three resources in the study area are listed on or eligible for the National Register of Historic Places: the Hertford Historic District, the Hertford Water Works and Ice Plant and Bridge No. 8. At the time of completion of the EA, FHWA and the State Historic Preservation Office had concurred that Alternatives B and D-Mod would have no adverse effect on the Hertford Historic District. Alternative E would have no effect on the Historic District. Alternative E would have no adverse effect on the Hertford Water Works and Ice Plant. Alternatives B and D-Mod would have no effect on the Ice Plant. All three alternatives would have an adverse effect on Bridge No. 8.

Following completion of the EA, project funding changed from federal to state funds and the US Coast Guard became the lead federal agency for the project.

In January 2015, additional coordination with the State Historic Preservation Office and the Coast Guard resulted in a change in the effects determination regarding the Hertford Historic District for Alternatives B and D-Mod. It was determined that these two alternatives would have an “adverse effect” on the Historic District. NCDOT, the State Historic Preservation Office and the Coast Guard signed an updated concurrence form. A copy of the form is included in Appendix A.

In a letter dated July 24, 2015, the Coast Guard notified the Advisory Council the project would have an adverse effect on the Hertford Historic District and Bridge No. 8. In a letter dated August 18, 2015, the Advisory Council stated it would participate in the consultation regarding the adverse effects. Copies of these letters are included in Appendix A.

Several area residents, the Hertford Downtown Business Owners Association and the Town of Hertford requested to be consulting parties in the consultation. A meeting was held in November 2016 to discuss possible mitigation measures that might be included in the Memorandum of Agreement.

Alternative B, the preferred alternative for the project, will have an adverse effect on both the Hertford Historic District and Bridge No. 8. A memorandum of agreement between the Coast Guard, NCDOT, the State Historic Preservation Office and the Advisory Council on Historic Preservation concerning the adverse effect of the project on the Hertford Historic District and Bridge No. 8 was signed in November 2017. A copy of the Memorandum of Agreement is included in Appendix C.

The Memorandum of Agreement includes the following commitments:

- **Photographic Recordation:** Prior to the initiation of construction, NCDOT will record the existing conditions of the properties and landscapes in the Hertford Historic District, including Perquimans Bridge Number 8 that are located adjacent to or affected by the project area in accordance with the Historic Structures and Landscape Recordation Plan, which can be found in the Section 106 Memorandum of Agreement. The results of the photographic recordation will be submitted to the SHPO in advance of any work taking place. The SHPO shall have fifteen (15) days from receipt of the materials to review and comment. If no comments are received by NCDOT after the 15 days, work may commence. Copies of the documentation will be deposited in the files of the SHPO, NCDOT Historic Architecture Group, and the Town and be made available to other signatories to the MOA.
- **Design of Replacement Bridge:** NCDOT has worked with the primary signatories and consulting parties to the memorandum of agreement on the plans for the replacement bridge and associated retaining walls to develop a unified design that incorporates context sensitive design principles and follows NCDOT's aesthetic guidelines. These design elements include:
 - A. truss swing span;
 - B. Oregon rails;
 - C. decorative pedestrian lights which match the streetlights throughout the town;
 - D. safety standard vertical lift gates;
 - E. two observational bump-outs on the bridge;
 - F. sidewalks on the east side of the bridge;
 - G. reuse of the current bridge plaque on the new bridge and an added second bridge plaque for the new bridge;
 - H. retaining walls of stamped concrete within the historic district;
 - I. signs on NCDOT property stating authorized vehicles and personnel only;
 - J. flag pole with US and NC flags lit dusk to dawn;
 - K. fenders composed of artificial timber and includes lights and signs.
- **Design of the Tender House:** NCDOT, in consultation with the primary signatories and concurring parties, shall develop plans for the tender house and parking spaces designated for use by the bridge operator and bridge maintenance crew to develop a unified design that incorporates context sensitive design principles and follows NCDOT's aesthetic guidelines. These design elements include: a two-story structure above the bridge deck with the generator housed inside the tender house; hipped roof structure with fiber cement siding; multi-light windows with pedimented arches; a three-foot

wide walkway around the second story; and an escape ladder on the east side of the tender house.

- **Landscape Plan:** NCDOT, in consultation with the primary signatories and concurring parties, shall develop a landscape plan for the south side of the bridge within the Hertford Historic District contained within the NCDOT right of way.
- **Vibration Monitoring:** To minimize vibration effects on the historic buildings in the vicinity of the bridge, a vibration monitoring and enforcement program shall be implemented by NCDOT as part of the construction contract. The Design-Build Team shall employ a vibration monitoring firm from NCDOT's list of approved firms to perform pre and post construction inventories and vibration monitoring of buildings located within 200 feet of the mainline project limits in the historic district. The inventories will require the appointed firm has access to the interior of buildings in the area being monitored.

If vibration levels rise above the prescribed thresholds that could cause structural damage to any building the contractor, or the property owners shall immediately contact the Resident Engineer. If structural damages are discovered during this period, work in that area of the project shall immediately cease and NCDOT shall contact SHPO and the property owners immediately to determine what steps should be taken to address the damage. After completion of all vibration inducing construction activities, vibration monitoring equipment may be discontinued. If vibration monitoring is to be discontinued prior to completion of the Undertaking, property owners will be notified by NCDOT.

- **Unanticipated Discovery:** In accordance with 36 CFR 800.11(a), if NCDOT identifies additional cultural resource(s) during construction and determines them to be eligible for the National Register of Historic Places (NRHP), all work will be halted within the limits of the NRHP-eligible resource(s) and the US Coast Guard (USCG) and North Carolina State Historic Preservation Office (SHPO) contacted within 48 hours. If after consultation with the Signatory Parties and additional mitigation is determined necessary, the NCDOT, in consultation with the Signatory Parties, will develop and implement appropriate protection/mitigation measures for the resource(s). NCDOT will notify the SHPO and USCG of any findings of additional cultural resources that are determined to not be eligible for NRHP listing. Inadvertent or accidental discovery of human remains will be handled in accordance with North Carolina General Statutes 65 and 70.

D. Traffic Noise Analysis

Since the EA was approved, a new noise policy has been developed. The Traffic Noise Analysis dated December 3, 2011 was reviewed to determine if revisions are needed based on the 2016 Traffic Noise Policy. The following information is amended to Section V.K of the EA.

One additional impacted receptor was identified for Alternative E, changing the total number of impacted receptors for Alternative E to 17. The 2016 Traffic Noise Policy states that a reduction of five dB(A) must be achieved for at least two impacted receptors for noise abatement to meet feasibility requirements. The additional impacted receptor for Alternative E is isolated and abatement measures, including noise barriers, are not considered feasible.

Per the 2016 Traffic Noise Policy, the project corridor was evaluated for non-residential, noise-sensitive land uses. Two non-residential land uses were identified and evaluated. A daycare center (Learning Center of Perquimans County) is within the project corridor of all build alternatives. A park (Missing Mill Park) is located within the project corridor of Alternative E only. It was determined that additional modeling of these land uses was not required because they were not impacted by the project.

No additional noise analysis will be performed for this project unless warranted by a substantial change in the project's design concept or scope.

E. Air Quality Analysis

Mobile Source Air Toxic (MSAT) Analysis

Controlling air toxic emissions became a national priority with the passage of the Clean Air Act Amendments, whereby Congress mandated the EPA regulate 188 air toxics, also known as hazardous air pollutants. The EPA assessed this expansive list and identified a group of 93 compounds emitted from mobile sources that are part of EPA's Integrated Risk Information System (IRIS). In addition, EPA identified nine compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers or contributors and non-cancer hazard contributors from the 2011 National Air Toxics Assessment. These are 1,3-butadiene, acetaldehyde, acrolein, benzene, diesel particulate matter (diesel PM), ethylbenzene, formaldehyde, naphthalene and polycyclic organic matter. While FHWA considers these the priority MSAT, the list is subject to change and may be adjusted in consideration of future EPA rules. A complete qualitative analysis of MSAT impacts is included in the Air Quality Analysis technical memorandum for this project (May 2011). This report may be viewed at the NCDOT Century Center, 1000 Birch Ridge Drive, Raleigh.

In FHWA's view, information is incomplete or unavailable to credibly predict the project-specific health impacts due to changes in MSAT emissions associated with a proposed set of highway alternatives. The outcome of such an assessment, adverse or not, would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual health impacts directly attributable to MSAT exposure associated with a proposed action.

The methodologies for forecasting health impacts include emissions modeling, dispersion modeling, exposure modeling and then final determination of health impacts - each step in the process building on the model predictions obtained in the previous step. All are encumbered by technical shortcomings or uncertain science that prevents a more complete differentiation of the MSAT health impacts among a set of project alternatives. These difficulties are magnified for lifetime (i.e., 70 year) assessments, particularly because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over that time frame, since such information is unavailable.

It is particularly difficult to reliably forecast 70-year lifetime MSAT concentrations and exposure near roadways; to determine the portion of time that people are actually exposed at a specific location; and to establish the extent attributable to a proposed action, especially given that some of the information needed is unavailable.

There are considerable uncertainties associated with the existing estimates of toxicity of the various MSAT, because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population, a concern expressed by HEI (Special Report 16, <https://www.healtheffects.org/publication/mobile-source-air-toxics-critical-review-literature-exposure-and-health-effects>). As a result, there is no national consensus on air dose-response values assumed to protect the public health and welfare for MSAT compounds, and in particular for diesel PM. The EPA states that with respect to diesel engine exhaust, "[t]he absence of adequate data to develop a sufficiently confident dose-response relationship from the epidemiologic studies has prevented the estimation of inhalation carcinogenic risk (EPA IRIS database, Diesel Engine Exhaust, Section II.C.)" https://cfpub.epa.gov/ncea/iris/iris_documents/documents/subst/0642.htm#quainhal.

There is also the lack of a national consensus on an acceptable level of risk. The current context is the process used by the EPA as provided by the Clean Air Act to determine whether more stringent controls are required in order to provide an ample margin of safety to protect public health or to prevent an adverse environmental effect for industrial sources subject to the maximum achievable control technology standards, such as benzene emissions from refineries. The decision framework is a two-step process. The first step requires EPA to determine an

“acceptable” level of risk due to emissions from a source, which is generally no greater than approximately 100 in a million. Additional factors are considered in the second step, the goal of which is to maximize the number of people with risks less than 1 in a million due to emissions from a source. The results of this statutory two-step process do not guarantee that cancer risks from exposure to air toxics are less than 1 in a million; in some cases, the residual risk determination could result in maximum individual cancer risks that are as high as approximately 100 in a million. In a June 2008 decision, the U.S. Court of Appeals for the District of Columbia Circuit upheld EPA’s approach to addressing risk in its two step decision framework. Information is incomplete or unavailable to establish that even the largest of highway projects would result in levels of risk greater than deemed acceptable ([https://www.cadc.uscourts.gov/internet/opinions.nsf/284E23FFE079CD59852578000050C9DA/\\$file/07-1053-1120274.pdf](https://www.cadc.uscourts.gov/internet/opinions.nsf/284E23FFE079CD59852578000050C9DA/$file/07-1053-1120274.pdf)).

Because of the limitations in the methodologies for forecasting health impacts described, any predicted difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with predicting the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against project benefits, such as reducing traffic congestion, accident rates, and fatalities plus improved access for emergency response, that are better suited for quantitative analysis.

F. Corrections to the Environmental Assessment

Correction to Wetland Impacts

The information on existing wetland resources and impacts to those resources was reported incorrectly. The reported value of 0.07 was based on the construction limits. The impacts should have been calculated based on the construction limits plus a 25-foot buffer. The following text should be replaced as shown below (**bold** text denotes changes).

Page S-3 (Table S1) – Revise the cell: Wetlands = **0.19** acres

Page 17 (Table 7) – Revise the cell: Wetlands = **0.19** acres

Page 24 (Section 2(d), First paragraph) – Revise the sentence: “study alternatives would impact approximately **0.19** acre of wetland.”

Correction to Submerged Aquatic Vegetation (SAV) Impacts

The EA reported that there was SAV habitat, but no impact on SAV species. The Merger Team agreed that there are no areas that meet the definition of SAV habitat. The following changes should be made.

Page S-3 (Table S1) – Revise the cell: SAV habitat = 0

Page 15 (Table 6) – Revise the cell: SAV habitat = 0

Page 17 (Table 7) – Revise the cell: SAV habitat = 0

Correction to Table 7

Page 17 (Table 7) – The adverse and disproportionate impact to low-income and minority populations for Alternative E 33-Foot Fixed Span should have been “none,” and the footnote removed.

IX. Basis for Finding of No Significant Impact

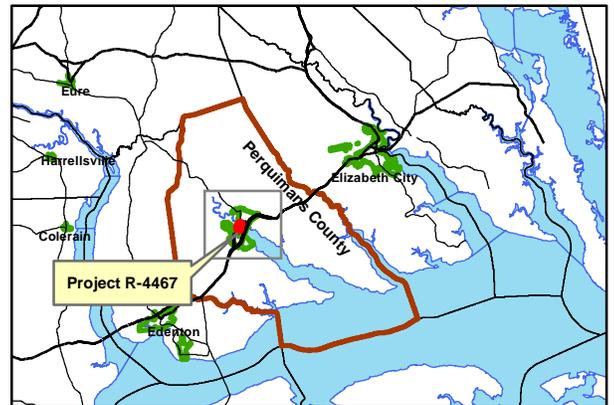
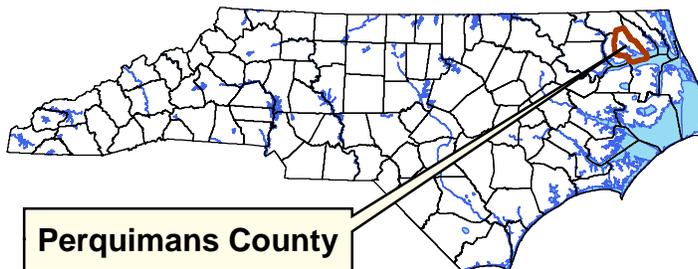
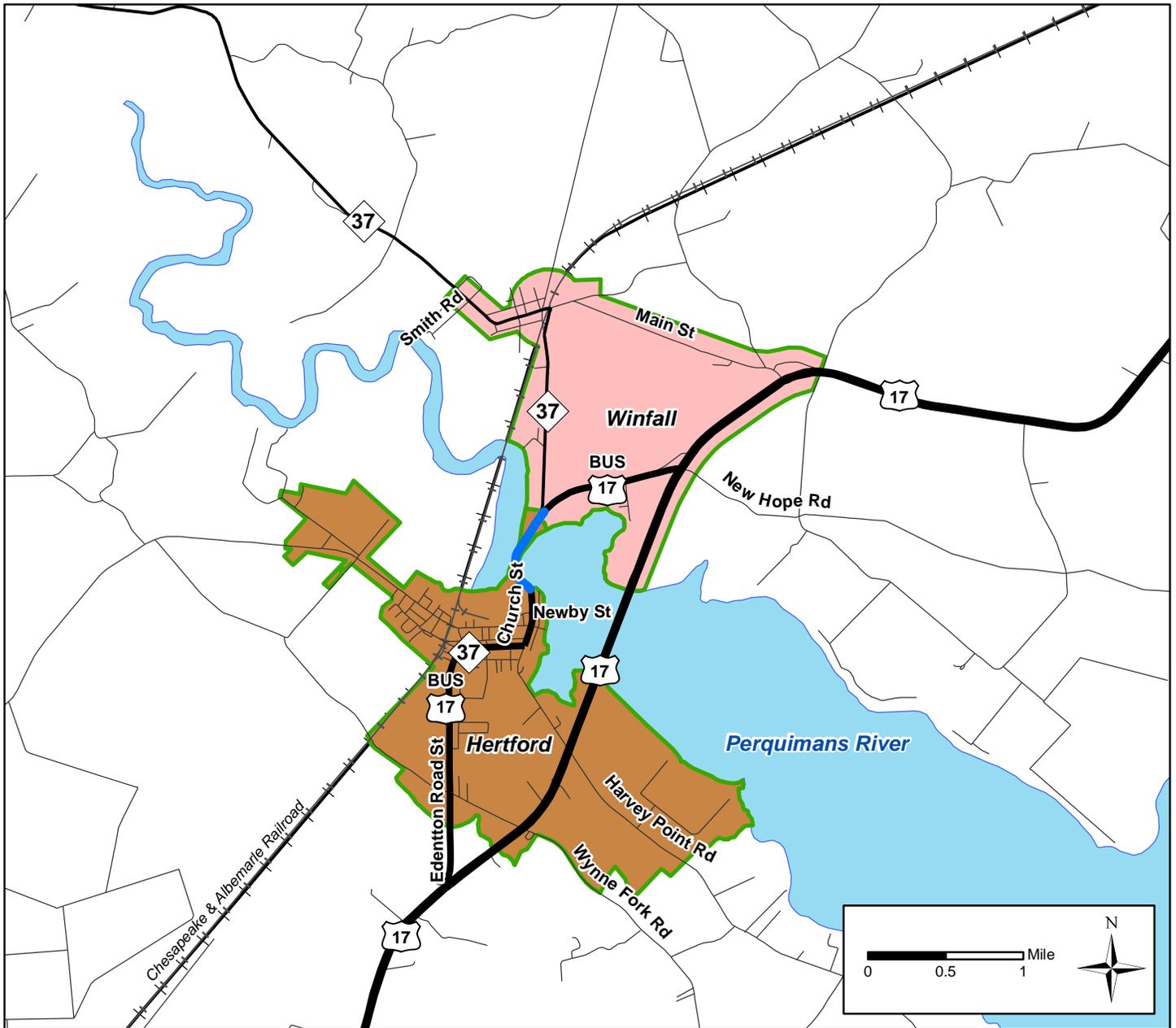
Based upon environmental studies and coordination with appropriate federal, state and local agencies, it is the finding of the North Carolina Department of Transportation that the proposed action will have no significant impact upon the quality of the human environment. Therefore, an environmental impact statement will not be required.

The following individual can be contacted for additional information on the proposed project:

Mr. James McInnis, Jr., P.E.
Senior Project Manager
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, North Carolina 27699-1548
Telephone: (919) 707-6029

FIGURES

- 1 – Project Vicinity Map
- 2 – Detailed Study Alternatives
- 3A-C –Preliminary Design of the Preferred Alternative
- 4 – Preferred Alternative Typical Section





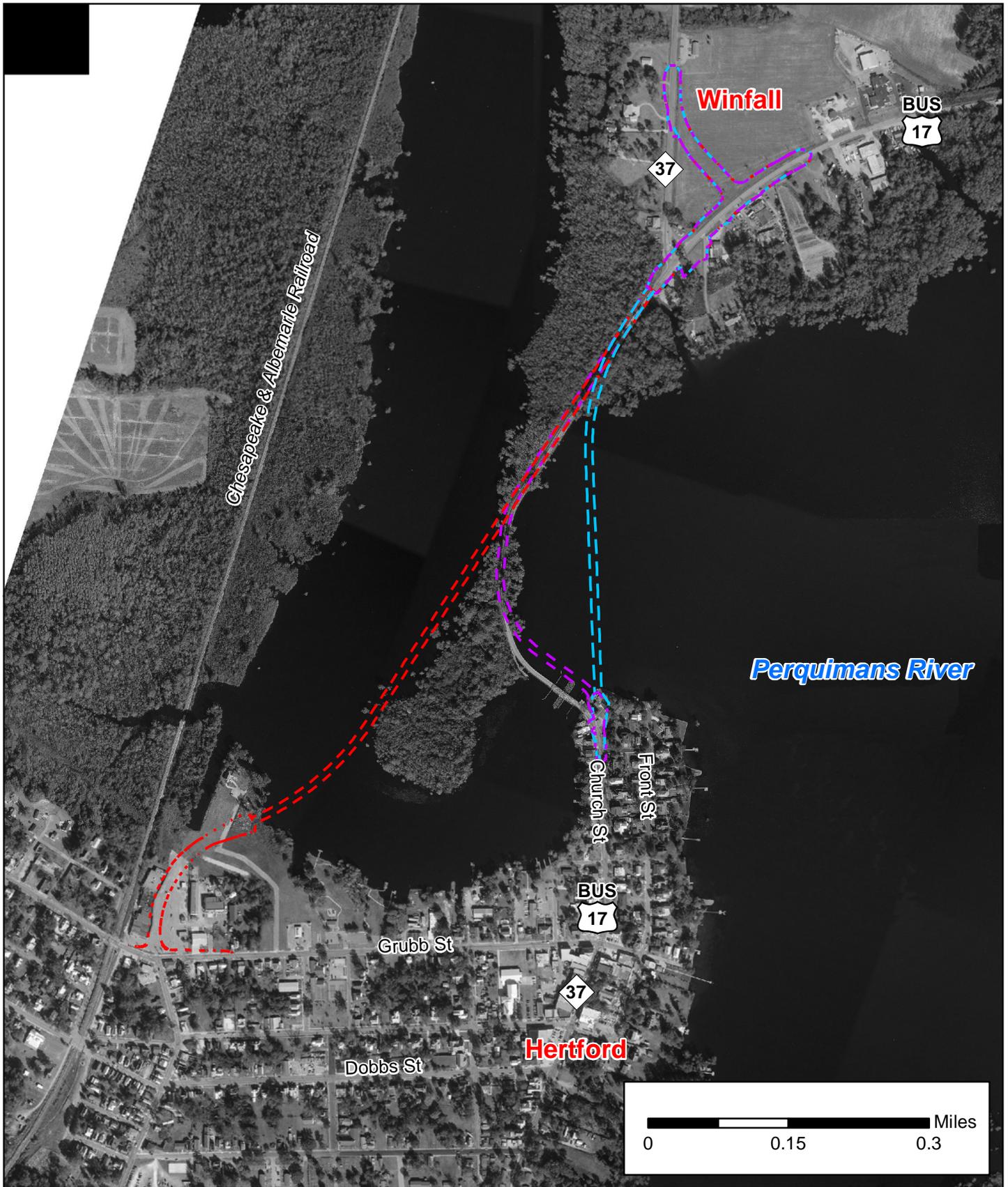
NORTH CAROLINA
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TRANSPORTATION

Legend

— Existing Bridge & Causeway	— NC Highways
— Municipal Boundary	— Roads
— US Highways	+ Railroads

Figure 1
Vicinity Map

R-4467 - US 17 Business from South of the Perquimans River Bridge to NC 37 Hertford and Winfall, Perquimans County



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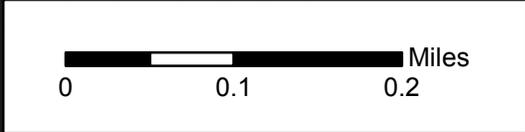
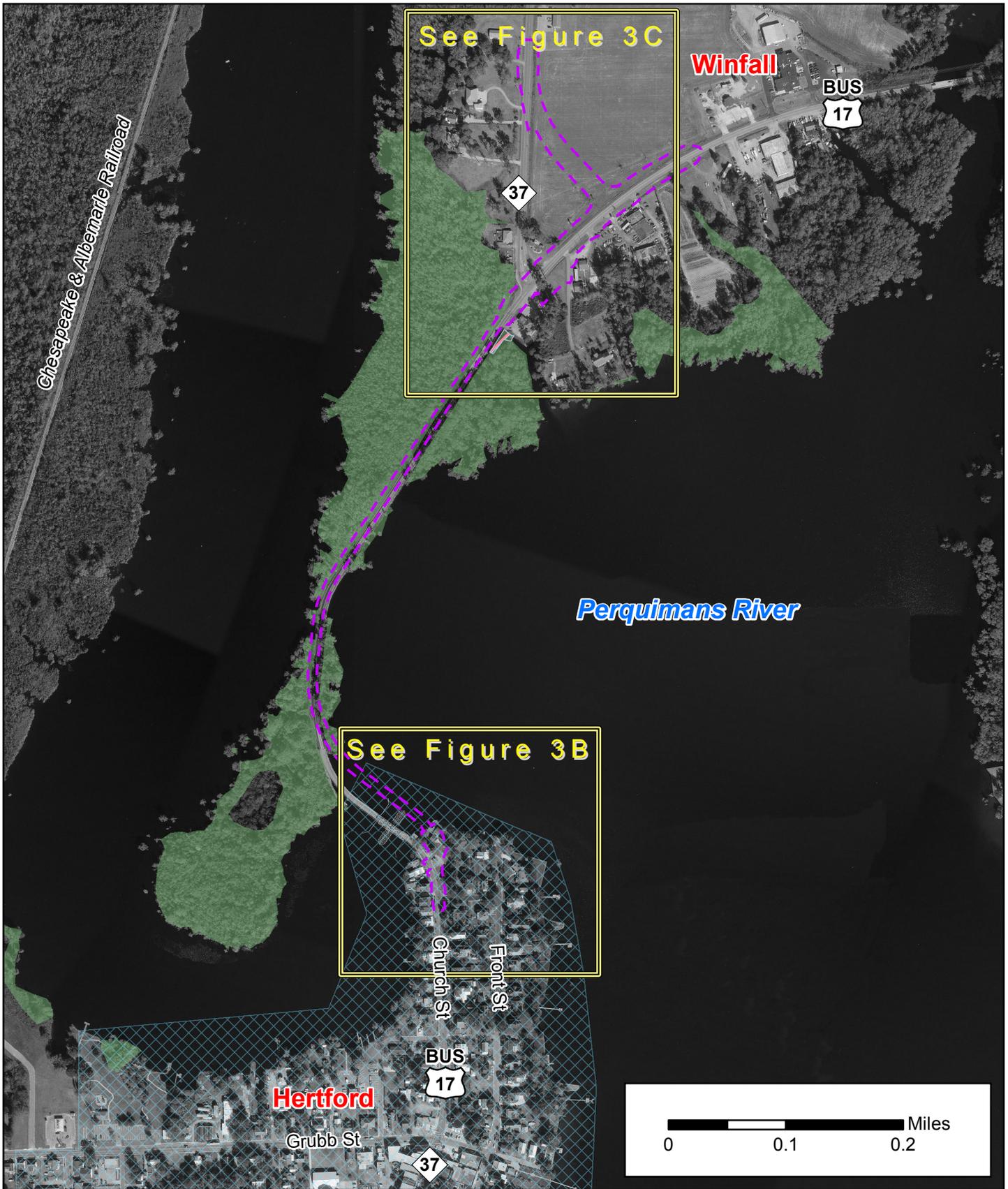
Legend

- - - Alternative B
- - - Alternative D Mod
- - - Alternative E

Figure 2

Detailed Study Alternatives

R-4467 - US 17 Business from South of the Perquimans River Bridge to NC 37 Hertford and Winfall, Perquimans County





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- Alternative B
- Hertford Historic District
- Jurisdictional Wetlands
- Jurisdictional Coastal Wetlands

Figure 3A

Preliminary Design of the Preferred Alternative

R-4467 - US 17 Business from South of
the Perquimans River Bridge to NC 37
Hertford and Winfall, Perquimans County



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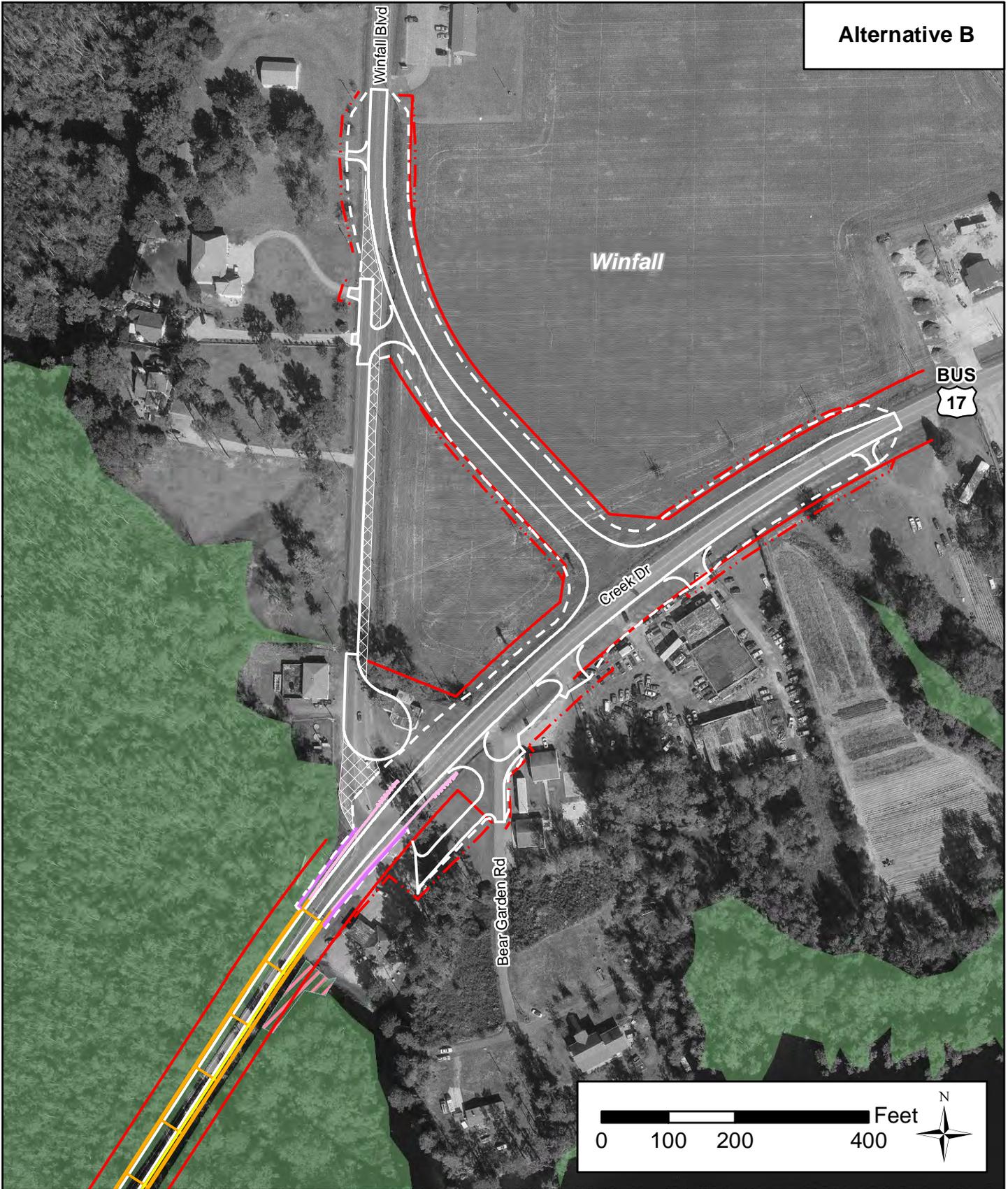


-  New Edge of Pavement
-  Construction Limits
-  Bridge
-  Guardrail
-  Retaining Wall
-  Sidewalk
-  Easement
-  Right-of-Way

Figure 3B
Southern Terminus
Preliminary Design of the Preferred Alternative

R-4467 - US 17 Business from South of
the Perquimans River Bridge to NC 37
Hertford and Winfall, Perquimans County

Alternative B



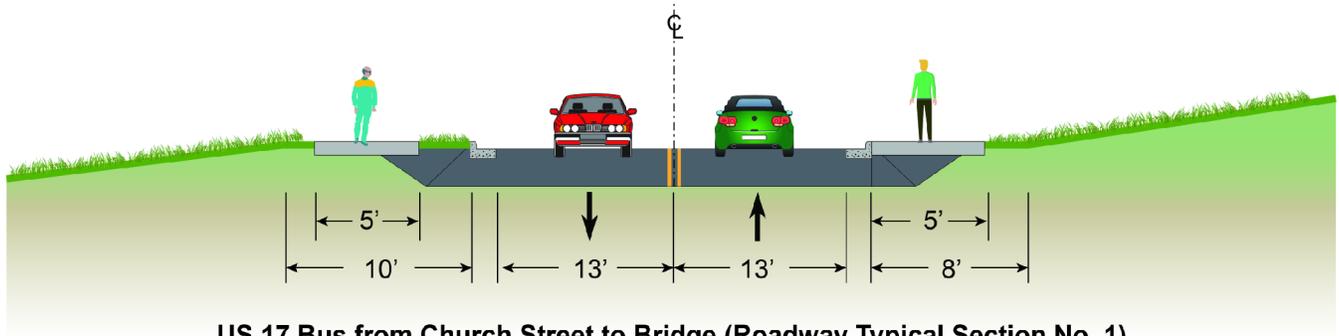
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- Sidewalk
- Bridge
- Construction Limits
- New Edge of Pavement
- Guardrail
- Retaining Wall

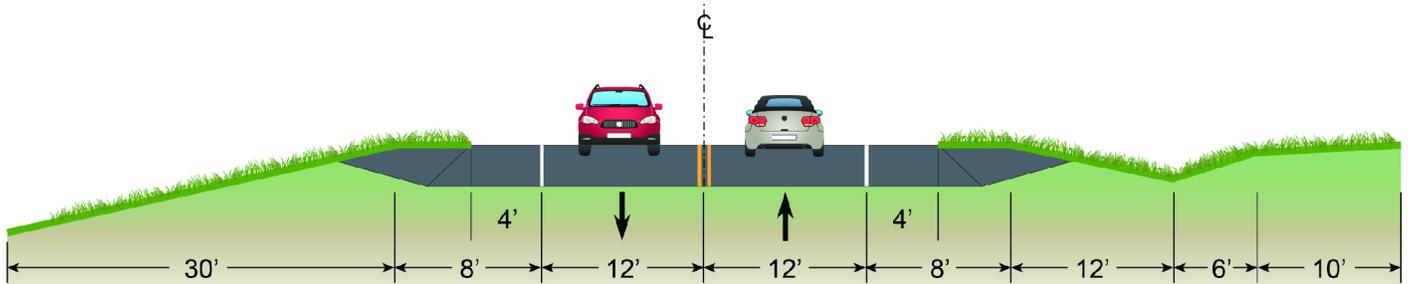
- Remove Pavement
- Easement
- Right-of-Way
- Jurisdictional Coastal Wetlands
- Jurisdictional Wetlands

Figure 3C
Northern Terminus
Preliminary Design of the Preferred Alternative

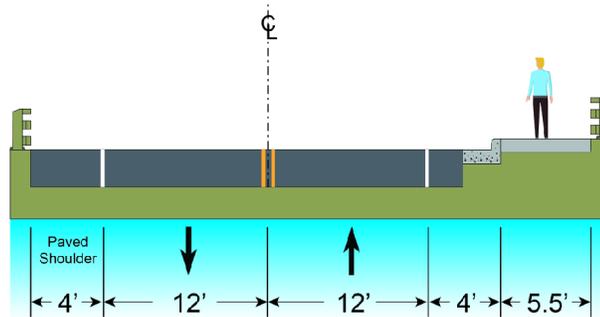
R-4467 - US 17 Business from South of the Perquimans River Bridge to NC 37 Hertford and Winfall, Perquimans County



US 17 Bus from Church Street to Bridge (Roadway Typical Section No. 1)



US 17 from Bridge to NC 37 (Roadway Typical Section No. 2)



US 17 over Perquimans River (Bridge Typical Section No. 1)

Not to Scale



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Figure 4
Preferred Alternative Typical Section

R-4467 - US 17 Business from South of
the Perquimans River Bridge to NC 37
Hertford and Winfall, Perquimans County

APPENDIX A

AGENCY COMMENTS

From: Militscher, Chris [<mailto:Militscher.Chris@epa.gov>]
Sent: Friday, April 26, 2013 2:13 PM
To: Miller, Joseph H; McInnis, Jay
Cc: william.j.biddlecome@usace.army.mil; Wainwright, David
Subject: EPA Review of EA for R-4467

Joseph/Jay: EPA has completed its review of the EA for R-4467, US 17 Business/NC 37 including replacement of Bridge No. 8, Perquimans County and offer the following comments:

1. The project has been in the NEPA/404 Merger team process and EPA has participated during the past concurrence points.
2. There are essentially 3 remaining detailed study alternatives, including B* (15-foot swing span), D-modified (33-foot fixed) & E* (33-foot fixed). The length of the bridges is described in Table 8 of the EA.
3. The alternative impacts are described in table 7 and further detailed in the EA. The impacts to the human and natural environment are extremely similar between the 3 alternatives.
4. Jurisdictional wetland impacts are estimated at 0.07 acres for each alternative.
5. All 3 alternatives have an adverse effect on the historic S-bridge. Alternatives B & D-modified also have a Section 4(f) impact on the Hertford Historic District.
6. According to Section 4, pages 26 & 27, none of the alternatives are expected to have a disproportionate effect on low-income and minority populations. In the EJ discussion, it further relates that the direct impact to EJ communities is expected to be minimal. However, in Table 7, Alternative E is described to have an adverse and disproportionate impact to low-income and minority populations because of increased traffic past schools, between churches and parking areas, and between school and future athletic field. The analysis provided in Section 4 and the table footnote needs to be further documented and explained prior to the selection of the LEDPA. Furthermore, the Traffic Noise section on pages 33-36 does not identify any specific noise impacted receptors that are low-income or minority populations.
7. SAV habitat impacts are less than an acre for all 3 alternatives.
8. Alternative B & D-modified each have 1 residential relocation and Alternative E has 1 business relocation.
9. Alternative B & D-modified each have 24 impacted noise receptors. Alternative E has 16 impacted noise receptors.
10. At this time, EPA has not identified an environmentally-preferred alternative and will continue to work with the NCDOT and other Merger team agencies on the selection of the LEDPA.

EPA requests a copy of the FONSI when it becomes available. Thank you for the opportunity to comment.

Christopher A. Militscher, REM, CHMM
USEPA Region 4 NEPA Program Office
404-562-9512

From: Fritz Rohde - NOAA Federal [<mailto:fritz.rohde@noaa.gov>]
Sent: Wednesday, May 17, 2017 3:13 PM
To: Dilday, Jason L <jdilday@ncdot.gov>
Subject: Re: R-4467 -Replacement of Bridge No. 8 (S-bridge) over the Perquimans River

Jason

I agree that the measures NCDOT proposes for the replacement of Bridge No. 8 will have negligible effects on Atlantic sturgeon and NMFS proposes no other conditions.

Fritz Rohde
Habitat Conservation Division
NMFS
Beaufort, NC 28516

From: Dilday, Jason L <jdilday@ncdot.gov>
Sent: Wednesday, May 17, 2017 2:32 PM
To: Fritz Rohde - NOAA Federal [<mailto:fritz.rohde@noaa.gov>]
Subject: Re: R-4467 -Replacement of Bridge No. 8 (S-bridge) over the Perquimans River

Fritz,

The following measures, many of which were used in a previous bridge replacement where Atlantic sturgeon was a species of concern, will be employed. These measures include:

- February 15 through June 30 in-water work moratorium.
- If drilled shafts are used, drill casings will be installed prior to the in-water work moratorium, allowing work within the casings to occur during the moratorium.
- The new bridge will occupy essentially the same footprint as the existing structure, causing no significant loss of foraging habitat.
- Turbidity generated during in-water construction and adjacent work will be minimized by NCDOT's best management practices and possibly through the use of turbidity curtains.
- Passage upriver/downriver will not be impaired to the point that alternative pathways are not available.
- Pile driving will not be conducted between the hours of 9:00 p.m. and 8:00 a.m.

Due to these measures, NCDOT believes the replacement of Bridge No. 8 over the Perquimans River will have negligible effect on Atlantic sturgeon. Please let me know if there are any other conditions you feel are pertinent to successfully minimizing impacts to the species, therefore satisfying Section 7 concurrence for Atlantic sturgeon.

Jason

Jason Dilday
Senior Environmental Specialist
N.C. Dept. of Transportation

APPENDIX B

PUBLIC COMMENT SUMMARY

**Public Comment Summary
September 17-October 21, 2013**

Combined Public Hearing
September 17, 2013, 4:30-9:00 p.m.
Perquimans County Recreation Department

The three detailed study alternatives were presented to the public at a public hearing in September 2013. Approximately 110 citizens attended the hearing. Eight citizens spoke at the formal hearing, written comments were received from 43 citizens, and the Town of Hertford signed a resolution supporting Alternative D-Mod 33' Fixed Span Bridge (which superseded their previous resolution supporting repair of the existing swing-span bridge).

September 2013 Public Hearing Comment Summary:

Alternative	Preferred ("For")	Opposed ("Against")
Alternative B 15' Swing Span Bridge	7	
Alternative D-Mod 33' Fixed Span Bridge	17	
Alternative E 33' Fixed Span Bridge	18	1

The refined designs and 3D renderings of Alternative B 15' Swing Span and Alternative D-Mod 33' Fixed Span were presented at a public meeting in November 2014. Approximately 106 citizens attended the meeting. Written comments were received from 23 citizens, as summarized below.

November 2014 Public Meeting Comment Summary:

Alternative	Preferred ("For")	Opposed ("Against")
Alternative B 15' Swing Span Bridge	0	
Alternative D-Mod 33' Fixed Span Bridge	5	2
Alternative E 33' Fixed Span Bridge	11	
No Build	1	
Repair existing bridge	1	
Need more time	1	
New swing span between homes on Church Street	1	
New fixed span on existing location	1	

Other written comments following the November 2014 public meeting included requests and suggestions for aesthetic enhancements, concern that a 33' bridge would not allow for school buses to operate during high winds, and concern that a 33' bridge would not allow the route to retain its NC Scenic Byway designation.

Three new petitions have been received since the September 2013 public hearing. The following citizen petitions have been received since the inception of the project:

- Support Alt E (2009): 70 signatures
- Support repairing existing bridge (2010): 3,988 signatures
- Support Alt D-Mod (July 2014): 185 signatures
- Request additional info about Alt B (Sept 2014): 952 signatures
- Oppose Alt D-Mod (June 2014): 318 signatures

The Town of Hertford signed a new resolution supporting Alternative B 15' Swing Span, which supersedes the previous resolutions. In addition, NCDOT has been notified that the County Commissioners have also passed a resolution that supports Alternative B 15' Swing Span. The Town's resolutions supporting Alternative D-Mod 33' Fixed Span and Alternative B 15' Swing Span both included the following reasons:

- It maintains an unobstructed view of the river and "turtle log;"
- The Council believes that any long term change in the flow of traffic through the historic downtown along Church Street would be detrimental to the retail, restaurant, service, and professional businesses located there now;
- Any long term closure of the bridge and causeway will mean a loss of businesses and jobs in the downtown area that would have an adverse effect on Town-wide revenues, sales tax and property taxes;
- The Town must have boat access to the upper portion of the Perquimans River for boaters, year round, with at least an opening as tall and wide as the current US 17 Bypass bridge;
- The Council requested that any upgrades and new facilities include pedestrian facilities; and
- The Council sees the need for maintaining an alternate route over the Perquimans River for emergency personnel, vehicles and school buses as well as providing a shorter route.

APPENDIX C

MEMORANDUM OF AGREEMENT

**MEMORANDUM OF AGREEMENT
AMONG THE UNITED STATES COAST GUARD,
UNITED STATES ARMY CORPS OF ENGINEERS,
THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION,
THE NORTH CAROLINA STATE HISTORIC PRESERVATION OFFICER,
AND
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING THE
IMPROVEMENTS TO US 17 BUSINESS FROM CHURCH STREET TO NC 37
INCLUDING THE REPLACEMENT OF BRIDGE NO. 8 OVER THE PERQUIMANS
RIVER IN HERTFORD, PERQUIMANS COUNTY, NORTH CAROLINA
TIP NO. R-4467**

WHEREAS, the United States Coast Guard (USCG) is the federal agency responsible for the processing of a federal bridge permit application for the Improvements to US 17 Business from Church Street to NC 37 including the replacement of Bridge Number 8 over the Perquimans River in Hertford, Perquimans County, North Carolina (the Undertaking) pursuant to the General Bridge Act of 1946 (33 U.S.C. §§ 525-533) and the Coast Guard bridge regulations (33 CFR. Subchapter J)[]; and

WHEREAS, the United States Army Corps of Engineers (USACE), intends to issue a Nationwide Permit, pursuant to 33 CFR 330, and to rely upon the findings and consultation process of the USCG, as the lead federal agency for the Undertaking; and

WHEREAS, the USCG has determined that the Undertaking will have an adverse effect upon the Hertford Historic District and Perquimans Bridge Number 8, properties listed in the National Register of Historic Places (NRHP); and

WHEREAS, the USCG has consulted with the North Carolina State Historic Preservation Officer (SHPO) pursuant to 36 CFR Part 800, regulations implementing Section 106 of the National Historic Preservation Act (54 U.S.C. 300101 et seq.); and

WHEREAS, the USCG has notified the Advisory Council on Historic Preservation (Council) of the adverse effect and the Council participated in the consultation; and

WHEREAS, NCDOT has participated in the consultation and has been invited by the USCG and SHPO to be a signatory to this Memorandum of Agreement (MOA); and

WHEREAS, the Town of Hertford (Town), the Citizens for the Preservation and Growth of Hertford, represented by Sara E. Winslow, and Hertford citizens Nancy Theodore, Frank and Connie Jaklic, Penny Byrd, Robert E. Halter, Virginia Miller, Don Keith, Leslie E. Piercy, Rhonda Waters, and Margaret and Charles Lindsay have participated in the consultation and have been invited by the USCG and SHPO to be concurring parties to this MOA;

NOW, THEREFORE, the USCG, USACE, NCDOT, SHPO and Council agree that the Undertaking shall be implemented in accordance with the following stipulations to take into account the effects of the Undertaking on the historic properties and that these stipulations shall govern the Undertaking and all of its parts unless this MOA expires or is terminated.

STIPULATIONS

The USCG shall ensure that the following measures are carried out:

I. Photographic Recordation

Prior to the initiation of construction, NCDOT will record the existing conditions of the properties and landscapes in the Hertford Historic District, including Perquimans Bridge Number 8 that are located adjacent to or affected by the project in accordance with the attached Historic Structures and Landscape Recordation Plan (Appendix A).

The results of the photographic recordation will be submitted to the SHPO in advance of any work taking place. The SHPO shall have fifteen (15) days from receipt of the materials to review and comment. If no comments are received by NCDOT after the 15 days, work may commence.

Copies of the documentation will be deposited in the files of the SHPO, NCDOT Historic Architecture Group, and the Town and be made available to other signatories to this MOA.

II. Design of Replacement Bridge

NCDOT has worked with the primary signatories and concurring parties on the plans for the replacement bridge and associated retaining walls to develop a unified design that incorporates context sensitive design principles and follows NCDOT's aesthetic guidelines. These design elements include:

- A. Truss swing span;
- B. Oregon rails;
- C. Decorative pedestrian lights which match the streetlights throughout the town;
- D. Safety standard vertical lift gates;
- E. Two observational bump-outs on the bridge;
- F. Sidewalks on the east side of the bridge;
- G. Reuse current bridge plaque on new bridge and add a second bridge plaque for the new bridge;
- H. Retaining walls of stamped concrete within the historic district;
- I. Signs on NCDOT property stating authorized vehicles and personnel only;
- J. Flag pole with US and NC flags lit dusk to dawn;
- K. Fenders composed of artificial timber and includes lights and signs.

III. Design of the Tender House

NCDOT, in consultation with the primary signatories and concurring parties, shall develop

plans for the tender house and parking spaces designated for use by the bridge operator and bridge maintenance crew to develop a unified design that incorporates context sensitive design principles and follows NCDOT's aesthetic guidelines. These design elements include:

- A. A two-story structure above the bridge deck with the generator housed inside the tender house;
- B. Hipped roof structure with fiber cement siding;
- C. Multi-light windows with pedimented arches;
- D. A three-foot wide walkway around the second story;
- E. An escape ladder on the east side of the tender house.

IV. Landscape Plan

NCDOT, in consultation with the primary signatories and concurring parties, shall develop a landscape plan for the south side of the bridge within the Hertford Historic District contained within the NCDOT right-of-way.

V. Vibration Monitoring

To minimize vibration effects on the historic district in the vicinity of the bridge, a vibration monitoring and enforcement program shall be implemented by NCDOT as part of the construction contract. The Design-Build Team shall employ a vibration monitoring firm from NCDOT's list of approved firms to perform pre and post construction inventories and vibration monitoring of buildings located within 200 feet of the mainline project limits in the historic district. The inventories will require the appointed firm has access to the interior of buildings in the area being monitored.

If vibration levels rise above the prescribed thresholds that could cause structural damage to any building the contractor, or the property owners shall immediately contact the Resident Engineer. If structural damages are discovered during this period, work in that area of the project shall immediately cease and NCDOT shall contact SHPO and the property owners immediately to determine what steps should be taken to address the damage. After completion of all vibration inducing construction activities, vibration monitoring equipment may be discontinued. If vibration monitoring is to be discontinued prior to completion of the Undertaking, property owners will be notified by NCDOT.

VI. Unanticipated Discovery

In accordance with 36 CFR 800.11(a), if NCDOT identifies additional cultural resource(s) during construction and determines them to be eligible for the NRHP, all work will be halted within the limits of the NRHP-eligible resource(s) and the USCG and North Carolina SHPO contacted within 48 hours. If after consultation with the Signatory Parties and additional mitigation is determined necessary, the NCDOT, in consultation with the Signatory Parties, will develop and implement appropriate protection/mitigation measures for the resource(s). NCDOT will notify the SHPO and USCG of any findings of additional cultural resources that are determined to not be eligible for NRHP listing.

Inadvertent or accidental discovery of human remains will be handled in accordance with North Carolina General Statutes 65 and 70.

VII. Dispute Resolution

Should any of the Signatory or Concurring Parties object within (30) days to any plans or documentation provided for review pursuant to this MOA, the USCG shall consult with the objecting party(ies) to resolve the objection. If the USCG or the objecting party(ies) determines that the objection cannot be resolved, the USCG will forward all documentation relevant to the dispute to the Council. Within thirty (30) days after receipt of all pertinent documentation, the Council will either:

- A. Provide the USCG with recommendations, which the USCG will take into account in reaching a final decision regarding the dispute, or
- B. Notify the USCG that it will comment pursuant to 36 CFR 800.7(c). Any Council comment provided in response to such a request will be taken into account by the USCG in accordance with 36 CFR 800.7(c) (4) with reference to the subject of the dispute. Any recommendation or comment provided by the Council will be understood to pertain only to the subject of the dispute; USCG and NCDOT's responsibility to carry out all of the actions under this agreement that are not the subject of the dispute will remain unchanged.

VIII. Amendments

Should any of the Signatory or Concurring Parties to this MOA believe that its terms cannot be carried out or that an amendment to the terms must be made, that party(ies) shall immediately consult with the other party(ies) to develop amendments in accordance with 36 CFR 800.6(c)(7). If an amendment cannot be agreed upon, the dispute resolution process set forth in Stipulation VII will be followed.

IX. Termination

Any of the Signatory Party (ies) may terminate the MOA by providing 30 days written notice to the other parties, provided that the signatories will consult during the period prior to termination to seek agreement on amendments or other actions that would avoid termination. Termination of this MOA will require compliance with 36 CFR 800. This MOA may be terminated by the execution of a subsequent MOA that explicitly terminates or supersedes its terms.

X. Duration

Unless terminated pursuant to Stipulation IX above, this MOA will be in effect until December 31, 2027. Prior to such time, the USCG may consult with the other signatories to reconsider the terms of the MOA and amend it in accordance to the dispute resolution process set forth in Stipulation VII.

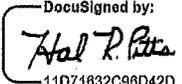
XI. Other Provisions

- A. Nothing in this MOA is intended to conflict with current law or regulation or the directives of the USCG or Department of Homeland Security. If this MOA is inconsistent with such authority, then that term shall be invalid, but the remaining terms and conditions of this agreement shall remain in full force and effect.
- B. This MOA is not an agreement by the United States, USCG to indemnify any party, nor is it an agreement by the United States, USCG to assume financial, legal, or any other liabilities.
- C. Nothing in this MOA shall constitute an obligation of funds of the United States in advance of an appropriation of those funds.

XII. Effective Date

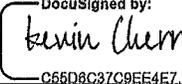
The terms of this MOA will become effective upon issuance of the Coast Guard bridge permit.

AGREED:

By:  11D71832C96D42D...

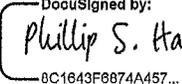
Mr. Hal R. Pitts
District Bridge Manager
Fifth Coast Guard District

Date: 12/8/2017

By:  C66D8C37C9EE4E7...

Kevin Cherry, Ph.D.
North Carolina State Historic Preservation Officer
North Carolina Department of Cultural Resources

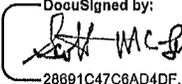
Date: 12/5/2017

By:  8C1643F6874A457...

Philip S. Harris III, P.E., C.P.M.
Environmental Analysis Unit Head
North Carolina Department of Transportation

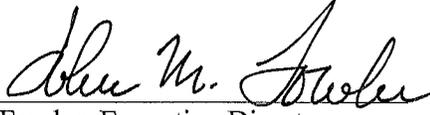
Date: 12/5/2017

for

By:  28691C47C6AD4DE...

Robert J. Clark
Colonel, U.S. Army
District Commander
US Army Corps of Engineers

Date: 12/6/2017

By: 
John M. Fowler, Executive Director
Advisory Council on Historic Preservation

Date: 1/10/18

**MEMORANDUM OF AGREEMENT
AMONG THE UNITED STATES COAST GUARD,
UNITED STATES ARMY CORPS OF ENGINEERS,
THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION,
THE NORTH CAROLINA STATE HISTORIC PRESERVATION OFFICER,
AND
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING THE
IMPROVEMENTS TO US 17 BUSINESS FROM CHURCH STREET TO NC 37
INCLUDING THE REPLACEMENT OF BRIDGE NO. 8 OVER THE PERQUIMANS
RIVER IN HERTFORD, PERQUIMANS COUNTY, NORTH CAROLINA
TIP NO. R-4467**

Execution of this MOA by USCG, USACE, NCDOT, ACHP, and the North Carolina SHPO, and implementation of its terms, evidence that the USCG, as the lead federal agency, has afforded the Council an opportunity to comment on the Undertaking.

CONCUR:

Brandon S. Shoaf
Town Manager, Town of Hertford

Date: _____

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CONCUR:

Sara. E Winslow
Citizens for the Preservation and Growth of Hertford

Date: _____

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CONCUR:

Nancy Theodore
103 Phelps Street
Hertford, NC 27944

Date: _____

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CONCUR:

Frank Jaklic
401 N Church Street
Hertford, NC 27944

Date: _____

Connie Jaklic
401 N Church Street
Hertford, NC 27944

Date: _____

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CONCUR:

Virginia Miller
405 North Front Street
Hertford, NC 27944

Date: _____

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CONCUR:

Don Keith
405 North Front Street
Hertford, NC 27944

Date: _____

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CONCUR:

Penny Byrd
137 Broad River Drive
Hertford, NC 27944

Date: _____

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CONCUR:

Robert E. Halter
105 Little River Circle
Hertford, NC 27944

Date: _____

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TIP NO. R-4467**

CONCUR:

Leslie E. Piercy
202 Front Street
Hertford, NC 27944

Date: _____

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CONCUR:

Rhonda Waters
217 North Church Street
Hertford, NC 27944

Date: _____

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CONCUR:

_____ Date: _____
Margaret Lindsay
306 N Front Street
Hertford, NC 27944

_____ Date: _____
Charles Lindsay
306 N Front Street
Hertford, NC 27944

APPENDIX A

Historic Structures and Landscape Recordation Plan For Improvements to US 17 Business from Church Street to NC 37 including the Replacement of Bridge No. 8 over the Perquimans River in Hertford, Perquimans County, North Carolina TIP No. R-4467

Photographic Requirements

- Elevations and oblique views of the properties affected by the R-4467 project within the Hertford Downtown Historic District, including Perquimans Bridge Number 8.
- Representative street/landscapes within the affected areas of historic district.

Photographic Format

- Color digital images (all views). Images are to be shot on a SLR digital camera with a minimum resolution of 6 megabyte pixels, at a high quality (preferably RAW) setting, to be saved in TIF format as the archival masters and labeled according to the State Historic Preservation Office standards.
- Images provided to the Town will be in JPEG format.
- All processing to be done to archival standards.
- Labeled map with a key to the shots and photographs
- The accompanying printed inventory of the images – including subject, location, date, and photographer information for each image – is to be completed according to the State Historic Preservation Office standards.

Copies and Curation

- One (1) set of all above mentioned photographic documentation, including a compact disc of labeled images, will be deposited with the North Carolina Office of Archives and History/Historic Preservation Office to be made a permanent part of the statewide survey and iconographic collection.
- One (1) contact sheet shall be deposited in the files of the Historic Architecture Group of NCDOT.